

1. (Currently amended) Representation of at least one area of the earth's surface, characterized in that wherein the area is subdivided into individual sections, and two data values are given for each of these sections individual section, whereby the a first datum (ELV) one of the data values contains an elevation indication of the surface above a predetermined level, and the a second datum (QTY) one of the data values gives a measure of at least one of the accuracy and for reliability of the first datum data value.

2. (Currently amended) Representation A representation according to the preceding claim, characterized in that 1 wherein the first and second data values are first and second digital data values.

3. (Currently amended) Representation A representation according to one of the preceding claims, characterized in that claim 1 wherein the earth's surface is divided into individual sections by a system of grid lines.

4. (Currently amended) Representation A representation according to claim 3, characterized in that wherein the system of grid lines relates to the WGS- 84 ellipsoid.

5. (Currently amended) Representation A representation according to one of the two preceding the previous claim, characterized in that 2 wherein each section corresponds to an area encompassed by two degrees of latitude and two degrees of longitude.

6. (Currently amended) Representation A representation according to one of the three preceding claims, characterized in that claim 3 wherein at least one, several, or all of said sections encompass encompasses an area of 30 arc-seconds x 30 arc-seconds.

7. (Currently amended) Representation A representation according to one of the claims 3 through 5, characterized in that claim 3 wherein at least one, several, or all of said sections encompass encompasses an area of 15 arc-seconds x 15 arc-seconds.

8. (Currently amended) Representation A representation according to one of the preceding claims, characterized in that claim 1 wherein at least one of the first data (ELV) and for the second data (QTY) are indications provides an indication regarding the geographic center of the section (cell-centered format).

9. (Currently amended) Representation A representation according to one of the preceding claims, characterized in that claim 1 wherein the elevation indication (ELV) of at least one, of several, or of all the sections relates to mean sea level (MSL).

10. (Currently amended) Representation A representation according to one of the preceding claims, characterized in that claim 1 wherein the elevation indication (ELV) of at least one, of several, or of all the sections indicates one of a maximum or terrain

elevation within the section and a minimum terrain elevation within the at least one section.

11. (Currently amended) Representation A representation according to one of the preceding claims, characterized in that claim 1 wherein the elevation indication (ELV) of at least one, of several, or of all the sections indicates an average terrain elevation within the at least one section.

12. (Currently amended) Representation A representation according to one of the preceding claims, characterized in that claim 1 wherein the elevation indication (ELV) of at least one, of several, or of all the sections indicates a weighted average terrain elevation within the at least one section.

13. (Currently amended) Representation A representation according to one of the preceding claims, characterized in that claim 1 wherein the elevation indications (ELV) are defined in meters.

14. (Currently amended) Representation A representation according to one of the preceding claims, characterized in that claim 1 wherein the elevation indications of a section are decreased or increased modified by a predetermined value in order to contain indications an indication of the type of terrain in the section.

15. (Currently amended) Representation A representation according to claim 14, characterized in that the first datum data value of a section contains one of the value -20000 or and the elevation indication (ELV) less minus 20000 if the terrain of the section is one of a sea or and an unknown type of body of water.

16. (Currently amended) Representation A representation according to one of the preceding claims, characterized in that claim 1 wherein the first datum data value contains the elevation indication (ELV) less minus 30000 if the terrain of the section is one of a sea or and a river.

17. (Currently amended) Representation A representation according to one of the preceding claims, characterized in that claim 1 wherein the first datum data value contains a predetermined value (No Data value) if no elevation indication can be determined for a section.

18. (Currently amended) Representation A representation according to the preceding claim, characterized in that claim 17 wherein the predetermined value is -9999.

19. (Currently amended) Representation A representation according to one of the preceding claims, characterized in that claim 1 wherein for at least one, for several or for all sections, the second datum (QTY) data value contains an indication of at least one of the horizontal deviation, horizontal quality, horizontal reliability, horizontal

confidence level, vertical deviation, vertical quality, vertical reliability and/or vertical deviation, quality, reliability, and/or confidence level of the elevation indication of a section.

20. (Currently amended) Representation A representation according to one of the preceding claims, characterized in that claim 1 wherein for at least one, for several or for all sections, section the second datum (QTY) data value indicates, in several stages or classes, at least one of the reliability or of at least one of the elevation indications and confidence level of at least one of the elevation indications.

21. (Currently amended) Representation A representation according to one of the two preceding claims, characterized in that claim 20 wherein the reliability is determined from at least one of the horizontal relative deviation of the elevation data of a section, the horizontal absolute deviation of the elevation data of a section, the vertical relative deviation of the elevation data of a section and/or relative [sic] the vertical absolute deviation of the elevation data of a section.

22. (Currently amended) Representation A representation according to one of the preceding claims, characterized in that claim 1 wherein the first data value and the second data value are stored in different files.

23. (Currently amended) Representation A representation according to one of the preceding claims, characterized in that claim 1 wherein the area of the earth's surface is divided into a number of segments, whereby each segment contains containing several sections, and

the first data values of the sections and the second data values of the sections, which collectively picture represent a segment of the earth's surface, are stored in one of the following two ways: one segment file each or; and, together in a segment files [sic] file.

24. (Currently amended) Representation A representation according to the preceding claim, characterized in that claim 23 wherein the first data value (ELV) and the second data value (QTY) are each stored in their own segment files.

25. (Currently amended) Representation A representation according to one of the two preceding claims, characterized in that claim 23 wherein at least one, several, or all segments are segment is bounded by two adjacent degrees of longitude and two adjacent degrees of latitude.

26. (Currently amended) Representation A representation according to one of the two preceding claims, characterized in that claim 25 wherein said at least one, several or all segments are segment is bounded by the two adjacent degrees of longitude and two adjacent degrees of latitude of the WGS-84 ellipsoid.

27. (Currently amended) Representation A representation according to ~~one of the three preceding claims, characterized in that claim 24 wherein at least several or all segments are bounded from one another by degrees or of latitude and degrees of longitude in the same degree interval.~~

28. (Currently amended) Representation A representation according to ~~one of the claims claim 23 through 27, characterized in that wherein at least one, several or all segment files each contain file contains the data of the sections a section of an area of the earth's surface 1° x 1° in size.~~

29. (Currently amended) Representation A representation according to ~~one of the preceding claims claim 23 through 28, characterized in that wherein at least one of the first and second data values of the sections of a segment, each beginning with the a northwest section, are stored in sequence one after the other in their progression on the a circle of latitude in the an easterly direction, whereby in the southerly direction, and sequential rows adjoining one another are stored one after the other in a southerly direction.~~

30. (Currently amended) Representation A representation according to ~~one of the preceding claims claim 23 through 29, characterized in that wherein at least one, several or all segment files exhibit file exhibits at least one of a first, general header area in which are contained information concerning at least one of the position and/or, extent or and size of the segment, and/or a second, file specific header area in which are contained information concerning at least one of the program used for producing the segment file, the production date, the type of the elevation indication and/or the maximum or elevations occurring in the segment, the minimum elevations occurring in the segment, and information regarding the type of the second datum data value.~~

31. (Currently amended) Representation A representation according to ~~one of the preceding claims, characterized by claim 1 including at least one file that indicates for each of the segments whether a segment file with elevation data exists for the segment in question each segment.~~

32. (Currently amended) Representation A representation according to ~~one of the preceding claims, characterized by claim 1 including at least one file that indicates for each of the segments whether no segment file exists for the segment in question, since the segment possesses only sea each segment.~~

33. (Currently amended) Representation A representation according to ~~one of the preceding claims, characterized by claim 1 including at least one file that indicates for each of the segments whether no segment file exists for the segment in question, since no~~

elevation data are available each segment.

34. (Currently amended) Representation A representation according to ~~one of the preceding claims, characterized by claim 1 including at least one of the following:~~

~~at least one file that indicates for each of the segments whether a segment file with elevation data exists for the each segment in question, and /or~~

~~at least one file that indicates whether no segment file exists for the each segment in question, since the segment possesses only sea, and /or~~

~~whether no segment file exists for the segment in question, since no elevation data are available.~~

35. (Currently amended) Method A method for creating a representation according to ~~one of the preceding claims, characterized in that claim 1 including~~

a) ~~for each individual one or more at least one data sources source containing at least one of elevation a first data and optionally value, an accuracy indication and /or a reliability indication for the elevation first data value contained in the data source for at least one part of the area to be represented, at least one of the following steps a1) - c) is executed in the following sequence or any desired sequence:~~

a1) ~~importation of the data from the data source and conversion of the elevation first data value into a predetermined data format, and for each individual elevation datum first data value, generation of a second data value that represents at least one of the deviation of the elevation datum first data value from the actual elevation, and an error value (variance) regarding the elevation datum (import) first data value,~~

a2) ~~translation of at least one of the converted elevation data first data value and /or the second values data value into a predetermined standard with regard to at least one of the horizontal plane (position) and /or the vertical direction (elevation) (convert),~~

a3) ~~conversion of the converted and translated elevation first data value and /or second values data value to a predetermined horizontal resolution (adjust),~~

a4) ~~check of the elevation first data, optionally section by section, values for credibility (trust), and computation and assignment of a second datum data value for each elevation datum first data value as a measure for at least one of the accuracy and /or reliability of the elevation datum first data value,~~

a5) ~~optionally, and to the extent that the elevation first data values represent average values for an area or a section, determination of a maximum elevation from the average values (offset);~~

b) ~~at least one of: for each elevation datum first data value, a new~~

elevation datum first data value is created from the elevation data from all of data sources ; and /or , for each second data value a new second datum from the second data from all of the data sources (merge) data value is created; and optionally

c) the at least one of the created, new elevation first data value and /or new second data are value is converted into a predetermined data format (export).

36. (Currently amended) Method A method according to the preceding claim ,characterized in that 35 wherein the new second data values are created from the second data values from all data sources by means of Kalman filtering.

37. (Currently amended) Method A method according to one of the two preceding claims, characterized in that claim 35 wherein at least one of the data sources that are to be used, the area of the earth's surface for which the representation is to be created, the steps that are to be executed and /or the predetermined parameters are determined and are stored in a process control file (process description file).

38. (Currently amended) Method A method according to the preceding claim ,characterized in that 37 wherein predetermined parameters of all of the steps that are to be executed and the steps that are to be executed are stored in a collective process control file (process description file).

39. (Currently amended) Method A method according to one of the claims 35 through 38, characterized in that claim 37 wherein the process control file contains the predetermined horizontal resolution as well as the type (maximum, average) of the elevation data of the representation that is to be created.

40. (Currently amended) Method A method according to one of the claims 35 through 39, characterized in that claim 35 wherein after each step, the data created by that step (sx_convert/adjust/trust/offset/export) are stored.

41. (Currently amended) Method A method according to one of the claims claim 35 through 40, characterized in that wherein the subsequent step processes the data created and stored by the preceding step.

42. (Currently amended) Method A method according to one of the claims claim 35 through 41, characterized in that wherein in each step, the predetermined parameters that are used in that step are checked, the elevation at least one of the first data value , and optionally, the second data or accuracy data, value created by the preceding step or present in the data sources are is imported and optionally checked, processed, and the processed elevation one of the first data value and the second data value are optionally checked and finally is stored.

43. (Currently amended) Method A method according to ~~one of the claims~~ claim 35 through 42, characterized in that wherein, for each step, a log is stored of the data processing that took place (sx_XXXXX.log).

44. (Currently amended) Method A method according to ~~one of the claims~~ claim 35 through 43, characterized in that wherein the data sources exhibits ~~first~~ one of the following: no or one equal indication concerning the accuracy of the elevation first data value for all of the elevation first data values contained therein.

45. (Currently amended) Method A method according to ~~one of the claims~~ claim 35 through 44, characterized in that at least one of before and ~~or~~ after at least one ; several or each processing step, for the preceding step at least one of the integrity and/or of the data, the reliability of the data and ~~or~~ the proper execution of the step ~~are~~ is checked.

46. (Currently amended) Method A method according to ~~the preceding claim~~, characterized in that 45 wherein, for predetermined processing steps, at least one of the integrity and/or of the data, the reliability of the data and ~~or~~ the proper execution of the step ~~are~~ is checked.

47. (Currently amended) Method A method according to ~~one of the claims~~ claim 35 through 46, characterized in that wherein, after at least one of step b) and ~~or~~ after the last step if the last step is not step b, at least one of the integrity and/or of the data, the reliability of the data and ~~or~~ the proper execution of the steps ~~are~~ is checked.

48. (Currently amended) Method A method according to ~~one of the claims~~ claim 45 through 47, characterized in that wherein the results of the check are recorded in a log.

49. (Currently amended) Method A method according to ~~one of the claims~~ claim 35 through 48, characterized in that wherein, if step a2) is performed, then in step a2), the data in the horizontal direction are translated to the WGS-84 system and the data in the vertical direction are translated to mean sea level (MSL).

50. (Currently amended) Method A method according to ~~one of the claims~~ claim 35 through 49, characterized in that wherein, if step a3) is performed, then in step a3), the data are converted to one of: a horizontal resolution ~~or~~ of a section of an integer multiple of 1 arcsecond; and, an extent of a section of an integer multiple of 1 arcsecond.

51. (Currently amended) Method A method according to ~~the preceding claim~~, characterized in that 50 wherein, if step a3) is performed, then in step a3), the data are converted to one of: a horizontal resolution of a section of one of 30 arc-seconds and 15 arc-seconds; ~~or~~ and, an extent of a section of one of 30 arc-seconds or and 15 arc-seconds.

52. (Currently amended) Method A method according to ~~one of the claims~~ ~~claim 35 through 51, characterized in that wherein, if step a4) is performed, then in step a4), the accuracy of the elevation first data value is checked individually for each section and each data source to provide a result, and the second datum data value is modified in dependency on this result.~~

53. (Currently amended) Method A method according to ~~one of the claims~~ ~~claim 35 through 52, characterized in that wherein, if step a5) is performed, then in step a5), a maximum elevation is determined from the average elevation indications.~~

54. (Currently amended) Method A method according to ~~one of the claims~~ ~~claim 35 through 53, characterized in that wherein a heuristic value (offset) is added to the average elevation indication.~~

55. (Currently amended) Method A method for air traffic control of an aircraft, ~~characterized in that wherein~~

during a flight of an aircraft, ~~at least one of~~ the current elevation, position and ~~/or~~ air route of the aircraft ~~are~~ ~~is~~ determined, the elevation first data value and the second data value of the representation according to ~~one of the claims~~ ~~claim 1 through 34~~ are determined for ~~at least one of~~ the aircraft position and ~~/or~~ the air route, and ~~these~~ ~~the thus-determined first data value and second data value~~ are compared with ~~at least one of~~ the current elevation and the air route of the aircraft.

56. (Currently amended) Device A device for safeguarding an aircraft against contact with the ground, ~~characterized by~~ ~~including~~ a device for the storing of a representation according to ~~one of the claims~~ ~~claim 1 through 34~~, a device for determining ~~at least one of~~ the elevation, the position and ~~/or~~ the air route of the aircraft, a device for exporting ~~at least one of:~~ ~~individual or sections of the representation; and,~~ several sections of the representation, whereby those sections of the representation that represent the earth's surface at the ~~at least one of the~~ ascertained position and ~~/or~~ on the ascertained air route of the aircraft are exported and are compared with the actual elevation and air route of the aircraft.